APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/349,198	07/07/1999	CHRISTOPHER F. PARKER	22074661-255	6293

26453   7590   07/17/2002

BAKER & MCKENZIE
805 THIRD AVENUE
NEW YORK, NY 10022

EXAMINER
COLBERT, ELLA

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)	
Office Action Summary	09/349,198		PARKER, CHRISTOPHER F.	
	Examiner		Art Unit	
	Ella Colbert		3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 April 2002* .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-6 and 12-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-6 and 12-20* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)		4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .		6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-6 and 12-20 are presented for examination. Claims 1 and 12

have been amended, claims 7-11 have been cancelled, and claims 17-20 are

newly added claims in this communication filed 04/12/02, entered as amendment

A, paper no. 9.

Drawings

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4)

because reference character "202" in fig. 2 has been used to designate both

"backup copy system" and "tablespace backup storage".

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) <u>mentioned</u> in the

description: Figure 3, step 300. A proposed drawing correction or corrected

drawings are required in reply to the Office action to avoid abandonment of the

application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference sign(s) <u>not mentioned</u> in the

description: "322" in Figure 3. A proposed drawing correction, corrected

drawings, or amendment to the specification to add the reference sign(s) in the

description, are required in reply to the Office action to avoid abandonment of the

application. The objection to the drawings will not be held in abeyance.

Claim Objections

3.   Claim 1 is objected to because of the following informalities: Applicant's

preamble is objected to because the preamble recites" a system for recovering a

table comprising:". The preamble would be better recited as "a system for recovering a database table comprising:". The claim limitations of claims 1,12, and 17 would be better recited using "database table" or "first database table", etc. to be in agreement with Applicant's title of the invention and to properly point out and to particularly claim that which Applicant regards as his invention. Claim 17, page 3, lines 9 and 10 recite "... the one more records selected ... data pages, while allowing access to". These lines should recite "... the one or more records selected ... data pages, while allowing access to the". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-6 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,721,915) Sockut et al, hereafter Sockut.

With respect to claim 1, Sockut teaches, a table recovery system (col. 1, lines 20-33 and col. 9, lines 19-22) the table recovery system operable to retrieve a backup copy of a tablespace and to apply updates from a log (col. 2, lines 4-11), the table recovery system restoring a table in the table space form the backup copy having log updates without having to restore other portions of the tablespace (col. 3, lines 61-67 and col. 4, lines 1-17). Sockut did not teach, a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only

access, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a table recovery system and in view of Sockut's teachings in col. 8, lines 57-67, col. 9, lines 1-18 and lines 37-44 of database performance and to modify in Sockut because such a modification would allow Sockut's system to have independent recovery of the data and indexes and a significant decrease in elapsed time since the log file updates are done for all objects in the database through the log file.

With respect to claim 2, Sockut teaches. the table recovery system further comprises a log record sorter system operable to sort log records from a log record file (col. 7, lines 25-36).

With respect to claim 3, Sockut teaches, a data page updater system coupled to the log record sorter system operable to apply log record updates to a data page (col. 7, lines 37-62).

With respect to claim 4, Sockut teaches, a data page scanner system coupled to the data page updater system, the data page scanner system operable to locate records associated with a table in a data page (col. 11, lines 41-67 and col. 12, lines 1-11).

With respect to claim 5, Sockut did not explicitly teach, a page row extractor system coupled to the data page scanner system operable to extract page rows from a data page that has been located by the data page scanner system, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a page row extractor system coupled to the data page scanner system operable to extract page rows from a data page that has been located by the data page scanner system to modify in Sockut in view of his teachings in col. 3, lines 10-17, col. 9, lines 64-67, and col. 10, lines 13 of a scan table, mapping a table including columns and rows because such a

modification would allow Sockut to have a page row extractor system to complement Sockut's page scanner system and mapping table rows.

With respect to claim 6, Sockut did not explicitly teach, the table row inserter system coupled to the page row extractor system operable to write extracted page rows to the table, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a table row inserter and to modify in Sockut because such a modification would allow Sockut to have additional rows of data occupying or potentially occupying each cell formed by a row-column intersection. It is well known in the database art that a row is a series of items arranged horizontally within some type of framework.

With respect to claim 12, receiving a backup copy of the tablespace having one or more tables (col. 9, lines 19-32), reading log records associated with the first table in the one or more tables (col. 4, lines 5-11), applying the log records to the backup copy (col. 4, lines 22-29), building new table data pages from the backup copy (col. 14, lines 66-67), scanning the new table data pages for records of the first table (col. 11, lines 52-66), and updating the first table from the records (col. 14, lines 12-22). Sockut did not explicitly teach, reading log records associated with a first table in the one or more tables, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to read log records associated with a first table in the one or more tables and to modify in Sockut because such a modification would allow the data to be read and updated in the first table before it is copied to the new table/tables and a backup copy is made of the data pages.

With respect to claim 13, Sockut did not explicitly teach, limiting access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to limit

access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace and to modify in Sockut because such a modification would allow Sockut to have the capability of retrieving the tablespace but not being able to change it prior to the first table being updated. It is well known in the art that a read-only document can be displayed or printed but not altered in any way; read-only memory (ROM) holds programs that cannot be changed.

With respect to claim 14, Sockut did not explicitly teach, providing update access to the second table after the first table is updated but it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide update access to the second table after the first table is updated and to modify in Sockut because such a modification would allow the second table to be updated in successive order since the first table is first to receive the update with the second table following which is in chronological order. Relational database management systems usually work with two data tables at the same time, relating the information or data through links established by a common column or field. A tablespace stores one or more tables containing file pages.

With respect to claim 15, Sockut teaches, sorting the log records (col. 12, lines 51-65).

With respect to claim 16, Sockut teaches, deleting the rows (col. 9, lines 64-67). Sockut did not explicitly teach, locking the indices, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to lock out the indices and to modify in Sockut because such a modification would eliminate the space needed for the indices and the time needed for accessing the indices.

With respect to claim 17, Sockut teaches, building one or more table data pages from the backup copy having the log records applied (col. 3, line 61-67

and col. 4, lines 1-30); selecting one or more records from the one or more table data pages, the one or more records belonging to the first table (col. 5, lines 56-67 and col. 6, lines 1-34); updating the first table with the one or more records selected from the one or more table data pages while allowing access to the rest of the one or more tables in the tablespace (col. 6, lines 35-50); and wherein the first table can be recovered without having to recover the tablespace entirely (col. 7, lines 13-56).

This independent claim is rejected for the similar rationale given for claim 12.

With respect to claim 18, allowing at least one or more tables to have update access to the tablespace when the first table is restored (col. 12, lines 18-25).

With respect to claim 19, deleting all rows of the first table (col. 9, lines 64-67). Sockut did not explicitly teach, locking out access to indexes in the table but it would have been obvious to one having ordinary skill in the art at the time the invention was made to lock out access to indexes in the table and to modify in Sockut because such a modification would eliminate the space needed for the index and the time needed for accessing the index.

With respect to claim 20, reading the log records from the log record file to a log record workspace (col. 4, lines 5-11), sorting the log records (col. 4, lines 11-17), and applying the log records to the tablespace backup copy (col. 4, lines 22-29 and col. 9, lines 19-22).

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Haderle et al (US 6,289,355) disclosed a technique for restoring a database in a computer.

Inquiries

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday from 6:30 am -5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-746-5622 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

E. Colbert
July 14, 2002